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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

OLSEN, LIN B

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,506	Applicant(s) JUNG ET AL.	
	Examiner LIN B. OLSEN	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on December 4, 2008 was filed after the mailing date of the first action on the merits. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

The disclosure is objected to because of the following informalities:

In paragraph [0032] of the printed publication of the application, “analyzer” is associated with both reference numbers 163 and 162. Further there is no reference number 163 in Figure 1. The Examiner respectfully suggests the analyzer is shown as reference number 161 as recited in paragraph [0033]

The text in paragraphs [0040] and [0043] of the printed publication does not correspond to the details of Fig. 2. In step 162, the figure recites “operating access by front seat passenger?” However, the text assumes the question is “operating access by driver?” The Examiner respectfully suggests that the specification is more correct.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 11 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for “an access detection device for determining which one of vehicle occupants is accessing the operator control, the vehicle occupants consisting of at least one of a driver and a passive passenger in the front seat” it does not reasonably provide enablement for “an access detection device for determining which one of vehicle occupants is accessing the operator control, the vehicle occupants including at least one of a driver and a passive passenger.” The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The specification is only enabling for discriminating the presence and/or actions of the driver and/or a passenger in the front seat. See Specification paragraph [0019], [0022] and [0027]. There is no enablement of discerning the actions of a passenger other than one in the front seat.

Claim Objections

Claim 11 is objected to because of the following informalities: “control unit” in line 4 of the claims should be “controller unit”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **11-13** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Pub. No. 2003/0220725 to Harter Jr. et al. (Harter). Harter is concerned with discriminating about who is controlling a vehicle system.

Regarding independent **claim 11**, “A vehicle system for operation in a motor vehicle, comprising:” - Harter describes deployment of an infotainment system in a vehicle (Abstract and Para [0016]).

“an operator control for operating the vehicle system;” - The infotainment device 16 (Fig. 1) includes a human machine interface (HMI) as described in paragraph 17 including a display 22 and input controls 24 for inputting user control commands.

“a controller unit operatively connected to the operator control, wherein the control unit influences operation of the vehicle system requested by the operator control; and” – Harter Fig. 4 illustrates the user discrimination control system for controlling the functionality and content of the infotainment device as described in Para [0023]. This system includes the HMI processor 36 (controller) which receives the inputs

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from the device and sends back controls to it. (Bi-directional arrow between elements 36 and 16)

“an access detection device for determining which one of vehicle occupants is accessing the operator control, the vehicle occupants including at least one of a driver and a passive passenger;” - In Para [0024-0025] Harter describes the user discrimination system which senses the presence of a passenger in the front seat. Further Para [0022] describes how proximity sensors 32 and 34 detect whether the passenger is accessing the operator control and deduces that the driver is accessing the controls if the passenger is not..

“wherein the controller unit influences operation of the vehicle system requested by the operator control at least depending on which one of vehicle occupants is accessing the operator control.” – In Fig. 5B of Harter, the enhanced functionality of the infotainment system is allowed if a passenger is present and controlling the interface for the device.

Regarding **claim 12**, which is dependent on claim 11, “further comprising: a motion detection device for determining a motion status of the motor vehicle, wherein the controller unit influences operation of the vehicle system requested by the operator control additionally as a function of a detected motion status of the vehicle.” – In Fig. 5A block 63, whether the vehicle is in park is detected and the user discrimination system is invoked (proceeding to step 64) only when the vehicle is in motion.

Regarding **claim 13**, which is dependent on claim 11, “wherein the controller unit limits at least some operations of the vehicle system requested by the operator control if it is determined that the vehicle is in motion and the operator control is being accessed by the vehicle driver.” - In Fig. 5 of Harter, only base functionality is allowed when the vehicle is moving and there is no passenger (yes at block 68), or if there is a passenger but they are not interacting with the controls (no at block 80).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims **14-16 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Harter as applied to claim 13 above, and further in view of U.S. Patent No. 5,983,147 to Krumm (Krumm). Krumm is concerned with vehicle occupant detection and classification.

Regarding **claim 14**, which is dependent on claim 13, “wherein the access detection device includes a video sensor system having an image-detection range that includes at least a driver seat and a front-seat passenger seat.” - While Harter teaches using video sensors to monitor the driver (Fig. 3), it does not detect a passenger using the same cameras. Krumm teaches taking a video of the front seat to see how the seat is occupied. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Krumm's video sensors for the weight sensors used in Harter

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to obtain the predictable result of determining whether a passenger was in the front seat.

Regarding **claim 15**, which is dependent on claim 14, “wherein the access detection device includes one of a stereo and multi-camera video sensor.” - As shown in Krumm Fig. 4, Krumm uses multiple cameras to detect the passenger.

Regarding **claim 16**, “which is dependent on claim 15, wherein the access detection device takes into consideration the gray-scale value information contained in detected signals, in determining which one of the vehicle occupants is accessing the operator control.”

Regarding **claim 21**, which is dependent on Claim 11, further comprising:

“a motion detection device for determining a motion status of the motor vehicle, wherein the controller unit influences operation of the vehicle system requested by the operator control additionally as a function of a detected motion status of the vehicle;” – In Harter, Fig. 5A block 63, whether the vehicle is in park is detected and the user discrimination system is invoked (proceeding to step 64) only when the vehicle is in motion.

“wherein the controller unit limits at least some operations of the vehicle system requested by the operator control if it is determined that the vehicle is in motion and the operator control is being accessed by the vehicle driver,” - In Fig. 5 of Harter, only base

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functionality is allowed when the vehicle is moving and there is no passenger (yes at block 68), or if there is a passenger but they are not interacting with the controls (no at block 80).

“wherein the access detection device includes a video sensor system having an image-detection range that includes at least a driver seat and a front-seat passenger seat, and” - While Harter teaches using video sensors to monitor the driver (Fig. 3), it does not detect a passenger using the same cameras. Krumm teaches taking a video of the front seat to see how the seat is occupied. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute Krumm's video sensors for the weight sensors used in Harter to obtain the predictable result of determining whether a passenger was in the front seat while also monitoring the driver.

“wherein the access detection device includes one of a stereo and multi-camera video sensor,” - As shown in Krumm Fig. 4, Krumm uses multiple cameras to detect the passenger.

“wherein the access detection device takes into consideration the gray-scale value information contained in detected signals, in determining which one of the vehicle occupants is accessing the operator control.” – Krumm in col. 3 lines 45-47 uses gray level mapping to improve the recognition of the cameras.

Claims **17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Harter as applied to claim 13 above, and further in view of U.S. Patent Pub. No.

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2005/0131607 to Breed (Breed). Breed is concerned obtaining information about the occupants of a vehicle.

Regarding **claim 17**, which is dependent on claim 13, "wherein the access detection device includes a radar sensor device." - - While Harter teaches using weight sensors and seat belt tensioners to determine if a passenger is present and an IR curtain to detect actions of the passenger, it does not mention using radar sensors. Breed, discussing general occupant sensors, uses transducers. In paragraph 90, he includes radar as a transducer that can be used for monitoring a passenger. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Breed's radar sensor in place of the IR screen as a simple substitution of one known element for another to obtain predictable results.

Regarding **claim 18**, which is dependent on claim 13, "wherein the access detection device includes at least one depth sensor which utilizes the propagation time principle for detection." - While Harter teaches using weight sensors and seat belt tensioners to determine if a passenger is present and an IR curtain to detect actions of the passenger, it does not mention depth sensors. Breed at paragraph 853 suggests using ultrasonic sensors for detecting the passenger location because their slower propagation velocity makes measurement easier. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Breed's propagation measurements in place of the IR screen as a simple substitution of one known element for another to obtain predictable results.

Regarding **claim 19**, which is dependent on claim 13, “wherein the access detection device includes at least one depth sensor which utilizes the laser scanner principle for detection.” - While Harter teaches using weight sensors and seat belt tensioners to determine if a passenger is present and an IR curtain to detect actions of the passenger, it does not mention laser scanners. Breed at paragraph 60 suggests using laser transducers for detecting the passenger location instead of ultrasonic sensors because of the greater accuracy. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Breed’s laser scanning in place of the IR screen as a simple substitution of one known element for another to obtain predictable results.

Regarding **claim 20**, which is dependent on claim 13, “wherein the access detection device includes at least one depth sensor which utilizes the structured lighting principle for detection.” - While Harter teaches using weight sensors and seat belt tensioners to determine if a passenger is present and an IR curtain to detect actions of the passenger, it does not mention structured light for detection. Breed at paragraph 65 suggests using structured light for analyzing the images to determine the passenger location. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Breed’s structured light analysis in place of breaking the IR screen as a simple substitution of one known element for another to obtain predictable results.

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Claims **22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Harter/Krumm as applied to claim 21 above, and further in view of Applicant's acknowledged well known art.

Regarding **claim 22**, which is dependent on Claim 21, wherein "the access detection device includes a radar sensor device, and wherein the access detection device includes at least one depth sensor which utilizes the propagation time principle for detection." - Harter/Krumm has described access detection devices using either of IR sensors or cameras. Applicant's specification at Para's [0028 and 0029] describes radar sensor systems using depth sensors using the propagation time principle as "abundantly known from the related art". It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate such sensors into the system of Harter/Krumm as a back-up to the sensors described to apply a known technique to a known device that was ready for improvement of increased reliability of the detection.

Regarding **claim 23**, which is dependent on Claim 21, wherein "the access detection device includes a radar sensor device, and wherein the access detection device includes at least one depth sensor which utilizes the laser scanner principle for detection." - Harter/Krumm has described access detection devices using either of IR sensors or cameras. Applicant's specification at Para's [0028 and 0029] describes radar sensor systems using depth sensors utilizing the laser scanner principle as "abundantly known from the related art". It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate such sensors into the system of Harter/Krumm

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as a back-up to the sensors described to apply a known technique to a known device that was ready for improvement of increased reliability of the detection.

Regarding **claim 24**, which is dependent on Claim 21, wherein the access detection device includes a radar sensor device, and wherein “the access detection device includes at least one depth sensor which utilizes the structured lighting principle for detection.” - Harter/Krumm has described access detection devices using either of IR sensors or cameras. Applicant’s specification at Para [0026] describes the evaluation of stereo or multichannel video using the principle of structured light as “described in detail in the related art”. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate such analysis into the system of Harter/Krumm as a back-up to the sensors described to apply a known technique to a known device that was ready for improvement of increased reliability of the detection.

Response to Arguments

Applicant's arguments filed December 8, 2008 have been fully considered but they are not persuasive. The applicant argues that Harter only detects the condition of a passenger (other than the driver) seated in the front passenger seat attempting to interact with the human machine interface. The claim, which recites “determining which one of vehicle occupants is accessing the operator control” has been objected to under 35 USC 112 1st paragraph, because the specification is only enabling for discriminating the presence and/or actions of the driver and/or a passenger in the front seat. See

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Specification paragraph [0019], [0022] and [0027]. There is no enablement for discerning the actions of a passenger other than one in the front seat. Further, Figure 4 illustrates the system as described in Claim 11 where the operator control is the human machine interface, the controller unit is the HMI processor and the access detection device is occupant sensor system 40.

The Affidavit requested from the Examiner is not required because the obviousness rejection that occasioned the request has been changed to a 35 USC 102(e) rejection.

Conclusion

In light of the Examiner's reinterpretation of the primary reference, the action remains Non-Final. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LIN B. OLSEN whose telephone number is (571)272-9754. The examiner can normally be reached on Mon - Fri, 8:30 -5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin B Olsen/
Examiner, Art Unit 3661

/Thomas G. Black/

Supervisory Patent Examiner, Art Unit 3661